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Heart Failure

PROGNOSTIC IMPACT OF DISCORDANT VERSUS CONCORDANT LEFT BUNDLE BRANCH BLOCK IN HEART FAILURE PATIENTS UNDERGOING CARDIAC RESYNCHRONIZATION THERAPY

Moderated Poster Contributions
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Background: Left bundle branch block (LBBB) is a frequent observation in heart failure (HF) patients, and is recognized as both an adverse prognostic factor and a key-element for referring patients to cardiac resynchronization therapy (CRT). It has been previously defined as concordant (cLBBB) or discordant (dLBBB) when associated with a positive or negative T wave in leads I and V5-V6, respectively. Recently, dLBBB has been shown to be associated with a worse clinical, neurohormonal, and prognostic profile in systolic HF patients. Our aim was to evaluate the impact of CRT on the prognostic value of LBBB morphology in a population of systolic HF.

Methods: A total of 406 consecutive systolic HF patients with LBBB (age 69±9 years, left ventricular ejection fraction, 26±6%), treated with CRT (CRT-P, n= 78; CRT-D, n= 328) from three Italian Centers underwent clinical, biohumoral, and echocardiographic characterization. All patients were then followed-up for cardiac events (median 31 months, range 1-137).

Results: cLBBB was observed in 110 (27%) patients, dLBBB in 296 (73%). dLBBB was more frequent in patients with ischemic cardiomyopathy, associated with a shorter QRS duration and worse glomerular filtration rate (all $p < 0.05$). No difference in pharmacological and device therapy was observed, except for a higher use of diuretics in dLBBB patients. At Kaplan-Meier analysis, dLBBB was associated with a worse prognosis for the composite end-point of sudden death and implantable cardioverter defibrillator shock ($p<0.05$), while no difference was observed in terms of either cardiac death or death due to HF progression.

Conclusions: dLBBB, despite CRT, is associated with the occurrence of sudden death and implantable cardioverter defibrillator shock in systolic HF patients, identifying a subset with higher arrhythmic risk, needing an enhanced, targeted therapeutical effort.